

BEST AVAILABLE COPY

U.S.S.N. 10/040,104

Listing of the Claims

1. (Previously presented) A wafer blade for picking up wafers on a top surface of the blade and for detecting any undesirable contact with wafers on a bottom surface of the blade comprising:

a blade body of generally elongated shape having a top surface and a bottom surface parallel to each other; and

a strain sensor mounted on and at least partially covers said bottom surface of the blade body, said strain sensor is sensitive to at least 1 μm displacement.

2. (Original) A wafer blade for picking up wafers on a top surface of the blade according to claim 1, wherein said strain sensor is a piezoelectric sensing device.

3. (Cancelled)

4. (Original) A wafer blade for picking up wafers on a top surface of the blade according to claim 1, wherein said blade body is formed in the shape of a fork.

U.S.S.N. 10/040,104

5. (Original) A wafer blade for picking up wafers on a top surface of the blade according to claim 1, wherein said blade body is formed in the shape of a rectangle.

6. (Original) A wafer blade for picking up wafers on a top surface of the blade according to claim 1, wherein said blade body is formed of metal or ceramic.

7. (Original) A wafer blade for picking up wafers on a top surface of the blade according to claim 1, wherein said strain sensor is formed in the shape of a thin film.

8. (Original) A wafer blade for picking up wafers comprising:

a blade body of fork shape having a top surface for picking up wafers and a bottom surface; and

a piezoelectric sensor mounted on said bottom surface for detecting any undesirable touching with wafers.

9. (Original) A wafer blade for picking up wafers according to claim 8, wherein said piezoelectric sensor is a thin film sensor.

U.S.S.N. 10/040,104

10. (Original) A wafer blade for picking up wafers according to claim 8, wherein said piezoelectric sensor is capable of detecting a strain imposed on said sensor.

11. (Previously Presented) A wafer blade for picking up wafers according to claim 8, wherein said blade body is fabricated of a metal or a ceramic.

12. (Original) A wafer blade for picking up wafers according to claim 8, wherein said piezoelectric sensor covers substantially the entire surface of said blade body.

13. (Original) A wafer blade for picking up wafers according to claim 8, wherein said piezoelectric sensor only covers partially the bottom surface of said blade body.

14. (Previously presented) A wafer pick-up system comprising:

a wafer blade having a blade body of generally elongated shape; said blade body having a top surface and a bottom surface;

a strain sensor mounted on said bottom surface of the blade body, said strain sensor is sensitive to at least 1 μm displacement; and

U.S.S.N. 10/040,104

an alarm device for receiving a signal from said strain sensor when a strain is detected and for sending an alarm signal to alert an operator.

15. (Original) A wafer pick-up system according to claim 14, wherein said blade body has a fork shape.

16. (Original) A wafer pick-up system according to claim 14, wherein said blade body has a rectangular shape.

17. (Original) A wafer pick-up system according to claim 14, wherein said alarm device receives an electrical current from said strain sensor when a strain is detected.

18. (Original) A wafer pick-up system according to claim 14, wherein said alarm device sends a signal to a process controller when a strain is detected by the strain sensor.

19. (Original) A wafer pick-up system according to claim 14, wherein said alarm signal is a warning light.

U.S.S.N. 10/040,104

20. (Original) A wafer pick-up system according to claim 14, wherein said strain sensor is a piezoelectric thin film sensor.